

Technologies and Pollution Factors in Electrical Machines Factory

Mihaela Cosmina Tita, Alexandru Bitoleanu

Faculty of Electrical Engineering, Craiova, Romania, mtita@em.ucv.ro, alex.bitoleanu@em.ucv.ro

Abstract— The environment with all natural and artificial factors is in close connection with ecological balance. Industrial activities are the primary sources of development and progress, resulting in higher living standards for the inhabitants of industrialized countries. Air is the main environmental factor that is influenced by human activity. Air pollution is affecting entire world population, regardless of age, gender and financial situation. Air pollution, indoors and outdoors, spreads very quickly and affects most people; because of this is necessary to use filtering and ventilation systems. Human health is affected on short or long terms with all type of symptoms. Environmental pollution can cause damage to human health from the simplest effects such as minor eyes irritation or upper respiratory system allergies, to other more severe such as heart disease, lung cancer, or even death. This paper deals with air pollution sources inside an electrical machines factory: particulate matter and heavy metals. Particulate matter derived from any human activity may have in their composition both inert substances and harmful substances such as heavy metals. In this paper we have presented the necessary equipment for sampling and analysis of air particulate and heavy metals. It was observed that some technological processes from an electrical machines factory are more damaging in terms of air pollution.